Family Spirit’s Approach to Precision Home Visiting

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Family Spirit Intervention

Home-Based Outreach

Structured, home-based curriculum taught by AI Home Visitors to young mothers from pregnancy – 36 mos post-partum

Family Involvement

Community Referrals
Family Spirit Impact

- Parenting knowledge
- Parenting self-efficacy
- Parenting stress
- Depression
- Substance use
- Social emotional development
People need and want different things

VS
National Home Visiting Programs

- Average effect sizes across models are usually small indicating a need to explore heterogeneity in effects
- Retention is challenging – only 50% of families retained by 12 months
- Some evidence to suggest tailoring services improves engagement and retention, but little systematic guidance on how we do that
Precision Home Visiting

Identify Active ingredients

Identify meaningful subgroups

Applying design modularity to put it together
Utilizing broad-based partnerships to design a precision approach to implementing evidence-based home visiting

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Identifying active ingredients

Survey of program implementers
(N = 71)

Below is a list of Family Spirit lessons from the Prenatal Care module. Based on your experience and knowledge of moms living in the community you serve, we want you to decide how important each lesson is to improving parenting. Slide the grey bar to indicate how much each lesson contributes to improved parenting.

- Contributing to a Healthy Pregnancy: 38
- Changes a Woman Goes Through: 59
- Understanding Gestational Diabetes: 14
- Baby Proofing and Safety: 80
- Preparing for Safe Travel and Outings: 39
Child outcomes by history of maternal substance use (N = 322)

Identify meaningful subgroups

Cohen's d

Overall
Past history

Dysregulation
0.35
Internalizing
0.29
Extrenalizing
0.29

0.41
### Survey of program implementers

\( N = 71 \)

<table>
<thead>
<tr>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>After Your Baby is Born - mom's emotional/physical changes</td>
</tr>
<tr>
<td>How to Feed</td>
</tr>
<tr>
<td>How to Diaper</td>
</tr>
<tr>
<td>How to Dress</td>
</tr>
<tr>
<td>Bedtime Safety</td>
</tr>
<tr>
<td>How to Bathe</td>
</tr>
<tr>
<td><strong>How to Comfort Your Crying Child</strong></td>
</tr>
<tr>
<td>How to Protect - from injuries</td>
</tr>
<tr>
<td>What to Do if Your Baby is Sick</td>
</tr>
<tr>
<td>What are Immunizations and Why do we Need Them?</td>
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<tr>
<td>More about Immunizations</td>
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<tr>
<td><strong>Parenting Techniques</strong> - beginning to recognize patterns in baby's behavior</td>
</tr>
<tr>
<td><strong>Protecting Children from Abuse and Neglect</strong></td>
</tr>
<tr>
<td>Introducing Solid Foods to Your Baby</td>
</tr>
<tr>
<td>Introduction to Oral Health Care</td>
</tr>
<tr>
<td>Oral Health Care: Getting a Healthy Start</td>
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</tbody>
</table>
Secondary Data Analysis
\((N = 322)\)

50% of participants improved significantly by 24 months PP across a range of outcomes
Design Modularity

Each Lego = Active ingredient

Interventions can be broken down into modules containing active ingredients

Each module produces a result

Each module connects to other modules in the same way

How you put together a module does not depend on how you put together another module
Piloting a Precision Approach to Family Spirit
Aims

A hybrid Type-III Pilot Implementation trial to:

1) Explore the acceptability and feasibility of a precision approach to home visiting from the perspective of enrolled mothers;

2) Examine the difference between Precision Family Spirit and Standard Family Spirit on program satisfaction, client-home visitor relationship, goal alliance and retention; and

3) Inform study design and other features for a fully powered study.
Precision Family Spirit Pilot Study

CONSORT Diagram
(as of January 7, 2020)

72 Potential participants approached

66 Consented

6 Excluded

2 Undecided

4 Declined

2 Consented but did not complete baseline

3 Consents awaiting baseline*

Completed baseline assessments (n=61)

Precision Family Spirit Intervention group
(n=30)
Withdrawn after baseline (n=1)

Completed 2-month assessment (n=12; 86%)

Completed 6-month assessment (n=2; 100%)

Standard Family Spirit Control group
(n=31)
Withdrawn after baseline (n=1)

Completed 2-month assessment (n=11; 85%)

Completed 6-month assessment (n=3; 100%)

*Study staff have been unable to contact these participants, but they have not yet fallen out of the baseline window.
<table>
<thead>
<tr>
<th>Sample Demographics</th>
<th>Standard FS</th>
<th>Precision FS</th>
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</thead>
<tbody>
<tr>
<td>N</td>
<td>31</td>
<td>30</td>
</tr>
<tr>
<td>Age, mean (SD)</td>
<td>26.7 (5.3)</td>
<td>26.3 (5.1)</td>
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<tr>
<td>Race/Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>American Indian or Alaska Native</td>
<td>15 (48%)</td>
<td>16 (53%)</td>
</tr>
<tr>
<td>Black or African American</td>
<td>0 (0%)</td>
<td>6 (20%)</td>
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<tr>
<td>White or Caucasian</td>
<td>15 (48%)</td>
<td>8 (27%)</td>
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<tr>
<td>Don't Know</td>
<td>1 (3%)</td>
<td>0 (0%)</td>
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<tr>
<td>Hispanic</td>
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<tr>
<td>No</td>
<td>28 (90%)</td>
<td>26 (87%)</td>
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<tr>
<td>Yes</td>
<td>3 (10%)</td>
<td>4 (13%)</td>
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<tr>
<td>Income Category</td>
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<tr>
<td>50% and under</td>
<td>12 (39%)</td>
<td>12 (41%)</td>
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<tr>
<td>51%-100%</td>
<td>7 (23%)</td>
<td>13 (45%)</td>
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<tr>
<td>100%-133%</td>
<td>2 (6%)</td>
<td>1 (3%)</td>
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<tr>
<td>134%-200%</td>
<td>5 (16%)</td>
<td>3 (10%)</td>
</tr>
<tr>
<td>201%-300%</td>
<td>3 (10%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>&gt;300%</td>
<td>2 (6%)</td>
<td>0 (0%)</td>
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<tr>
<td>First time mother</td>
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<td></td>
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<tr>
<td>No</td>
<td>15 (48%)</td>
<td>21 (70%)</td>
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<td>Yes</td>
<td>16 (52%)</td>
<td>9 (30%)</td>
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<tr>
<td>Ever use alcohol</td>
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<td></td>
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<tr>
<td>No</td>
<td>1 (3%)</td>
<td>3 (10%)</td>
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<tr>
<td>Yes</td>
<td>30 (97%)</td>
<td>27 (90%)</td>
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<tr>
<td>Ever use drugs</td>
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<tr>
<td>No</td>
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<td>15 (50%)</td>
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<tr>
<td>Yes</td>
<td>16 (53%)</td>
<td>15 (50%)</td>
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<tr>
<td>Nutrition concerns</td>
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<tr>
<td>No</td>
<td>28 (90%)</td>
<td>25 (83%)</td>
</tr>
<tr>
<td>Yes</td>
<td>3 (10%)</td>
<td>5 (17%)</td>
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<tr>
<td>Housing concerns</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>26 (84%)</td>
<td>23 (77%)</td>
</tr>
<tr>
<td>Yes</td>
<td>5 (16%)</td>
<td>7 (23%)</td>
</tr>
</tbody>
</table>
Update: Precision Family Spirit Pilot Study

- **Visit check-ins**
  - Administered at each precision FS group lesson visit to assess specific outcomes
  - Measurement-based approach
    1. Respond to emergent needs
    2. Track clients over time

- **Example: Top Problems Scale**
  - First assessed at baseline
  - Same challenges tracked throughout study
Update: Precision Family Spirit Pilot Study

• Home visitor perspectives:
  – Recognition that “tailoring” was already happening but needs to be studied and validated
  – Useful to have guidance and consistency in questions participants are asked
  – More accountability for focusing on content delivery and not just “crisis management” – education is important even during tough situations
  – Lesson pathways allow for skipping lessons that are not relevant to families
  – Appreciate that Care4 provides schedule of lessons based on family’s needs

**Precision Group:** “I really liked the program, because I just, I get like she brings books and stuff for me. And it's really helpful to know more like about what to do with my baby how to play with her and like, what to make for her, so she can eat food.”

**Standard Group:** “[the least helpful thing has been] smoking questions and education because it is irrelevant in our household.”
Limitations

- Identification of active ingredients based on opinions
- Modules created only within existing Family Spirit content
- Under powered pilot trial
A Peak into Next Steps

• National level work to identify common elements across home visiting models
• Expert panels – taxonomy of common content areas across evidence-based models
• Coding of model manuals/curriculum based on taxonomy

How to get involved?

• Feedback/thoughts welcome
• Join the expert panel!
  – Questionnaire
  – 2-3 Webinars
• Join our team of coders
Thank you for listening. If you would like to learn more about our work or get involved, please contact one of our study team members:

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